APPENDIX 1 ~~– Minimum Technical Requirements~~- Core Elements for ~~Stormwater Management at~~ New Development and Redevelopment ~~Sites~~

Section 1. Exemptions

~~The following practices are exempted from the Minimum Technical Requirements:~~Unless otherwise indicated in this section, the practices described in this section are exempt from the Core Elements, even if such practices meet the definition of new development or redevelopment.

Forest Practices

Forest practices regulated under Title 222 WAC ~~are exempt. Conversions of~~ , except for Class IV-General forest ~~lands~~practices that are conversions from timberland to other uses, are ~~not~~ exempt from the provisions of the Core Elements.

Commercial Agriculture

Commercial agriculture practices involving working the land for production are generally exempt. However, the conversion ~~of~~from timberland to agriculture, and the construction of impervious surfaces are not exempt.

Oil and Gas Field Activities or Operations

Construction of drilling sites, waste management pits, and access roads, as well as construction of transportation and treatment infrastructure such as pipelines, natural gas treatment plants, natural gas pipeline compressor stations, and crude oil pumping stations are exempt. Operators are encouraged to implement and maintain Best Management Practices (BMPs) to minimize erosion and control sediment during and after construction activities to help ensure protection of surface water quality during storm events.

~~Road and Parking Area Preservation/~~Pavement Maintenance Projects

~~The following road and parking area maintenance practices are exempt (see also *Partial Exemptions* below):~~

~~Pothole~~A preservation or maintenance project is defined as preserving/protecting infrastructure by rehabilitating or replacing existing structures to maintain operational

and structural integrity, and for the safe and efficient operation of the facility. Pavement maintenance projects do not increase the traffic capacity of a roadway or parking area.

The exemptions described below may only be applied to an entire project. The entire project must be for the sole purpose of maintaining a pavement area. Pavement maintenance projects do not involve redevelopment work beyond the pavement maintenance. Pavement maintenance projects do not change the characteristics of a roadway (e.g. changing a four-way intersection to a roundabout is not a pavement maintenance project). Projects that are not solely for pavement maintenance work are not exempt from the Core Elements, and must consider any pavement maintenance areas within the project as new or replaced hard surfaces when determining the applicableCore Elements.

The following pavement maintenance projects are exempt from all Core Elements:

- pothole and square cut patching~~;~~,
  - ~~Crack sealing;~~
  - ~~Resurfacing with in-kind material (such as asphalt to asphalt) without expanding the road prism or parking area;~~
- ~~Overlaying~~overlaying existing asphalt or concrete pavement with bituminous surface treatment (BST or "chip seal"), asphalt, or concrete without expanding the area of coverage~~;~~,
- ~~Shoulder~~shoulder grading~~;~~,
- ~~Reshaping~~reshaping/regrading drainage systems~~;~~,
- crack sealing, and
- ~~Vegetation~~vegetation maintenance.

The following pavement maintenance projects are subject to only 4.1 Core Element #1: Preparation of a Stormwater Site Plan and 4.2 Core Element #2: Construction Stormwater Pollution Prevention Plan (SWPPP):

- Removing and replacing a concrete or asphalt roadway to base course or subgrade or lower without expanding the impervious surfaces.
- Repairing the roadway base or subgrade.
- Overlaying existing gravel with bituminous surface treatment (BST or "chip seal"), asphalt, or concrete without expanding the area of coverage, or overlaying BST with asphalt, without expanding the area of coverage. For this type of project, this partial exemption applies under the following conditions only:
  - For roads, these practices are exempt from additional Core Elements only if the traffic surface will be subject to an average daily traffic (ADT) volume of < 7,500 on an urban road or an ADT volume of < 15,000 vehicles on a rural

road, freeway, or limited access control highway. If these thresholds are exceeded, these are considered new hard surfaces.

- For parking areas, these practices are exempt from additional Core Elements only if the traffic surface will be subject to < 40 trip ends per 1,000 square feet of building area or 100 total trip ends. If either of these thresholds is exceeded, these are considered new hard surfaces.

~~Partial Exemptions~~

~~Partial exemptions apply to certain practices associated with redevelopment projects only.~~

~~The following practices are generally exempted from all of the Minimum Technical Requirements except for Core Element #1 *Preparation of a Stormwater Site Plan* and Core Element #2 *Construction Stormwater Pollution Prevention.*~~

Underground Utility Projects

This exemption may only be applied to an entire project. The entire project must be for the sole purpose of installing, maintaining, and/or upgrading an underground utility, involving only the trenching necessary for the underground utility work (including any over-excavating necessary for the utility trench). Underground utility projects do not involve redevelopment work beyond the utility work. Projects that are not solely for underground utility work are not exempt from the Core Elements, and must consider any underground utility work areas within the project as new or replaced hard surfaces when determining the applicable Core Elements.

Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics are only subject ~~only~~ to 4.1 Core Element #1: Preparation of a Stormwater Site Plan and 4.2 Core Element #2: Construction Stormwater Pollution Prevention~~.~~ Plan (SWPPP).

~~Road and Parking Area Preservation/Maintenance~~

~~A preservation or maintenance project is defined as preserving/protecting infrastructure by rehabilitating or replacing existing structures to maintain operational and structural integrity, and for the safe and efficient operation of the facility. Maintenance projects do not increase the traffic capacity of a roadway or parking area. The following practices are subject to only Core Element #1 *Preparation of a Stormwater Site Plan* and Core Element #2 *Construction Stormwater Pollution Prevention*:~~

- ~~Removing and replacing a concrete or asphalt roadway to base course or subgrade or lower without expanding the impervious surfaces.~~
- ~~Repairing the roadway base or subgrade.~~

- Overlaying existing gravel with bituminous surface treatment (BST or "chip seal") or asphalt or concrete without expanding the area of coverage, or overlaying BST with asphalt, without expanding the area of coverage. For this type of project, partial exemption applies under the following conditions ***only***:
    - For roads, these practices are exempt from additional Core Elements *only* if the traffic surface will be subject to an average daily traffic (ADT) volume of less than 7,500 on an urban road or an ADT volume of less than 15,000 vehicles on a rural road, freeway, or limited access control highway. If these thresholds are exceeded, refer to the Redevelopment section to determine which Core Elements apply.
    - For parking areas, these practices are exempt from additional Core Elements *only* if the traffic surface will be subject to less than 40 trip ends per 1,000 square feet of building area or 100 total trip ends. If these thresholds are exceeded, refer to the Redevelopment section aboveto determine which Core Elements apply.

Transportation Safety Improvement Projects

Transportation safety improvement projects are subject only to Core Element #1 *Preparation of a Stormwater Site Plan* and Core Element #2 *Construction Stormwater Pollution Prevention* except as specified under sub-item (a) under conditions for applying Core Element #5 *Runoff Treatment* in the Redevelopment section. Applicable transportation safety improvement projects that do not enhance the traffic capacity of a roadway may include, for example, curb ramp improvements to enhance accessibility for compliance with the Americans with Disabilities Act.

Certain transportation safety improvement projects such as sidewalks, bike lanes, bus pullouts and other transit improvements must be evaluated on a case-by-case basis to determine whether additional Core Elements apply. A safety project that enhances the traffic carrying capacity of a roadway is ***not*** exempt from other Core Elements. Local governments shall keep records of all projects granted exemptions to the Core Elements.

Local Exceptions/Variances Requirements

Exceptions to the Core Elements may be granted by the Permittee prior to project approval and construction. The Permittee may grant an exception following an application for an exception with legal public notice per the Permittee's guidance and requirements for exceptions and variances. The Permittee's decision should include a written finding of fact.

The Permittee may grant an exception to the Core Elements if such application imposes a severe and unexpected economic hardship. To determine whether the application imposes a severe and unexpected economic hardship on the project applicant, the Permittee must consider and document with written findings of fact the following:

- ~~The current (pre-project) use of the site, and~~
- ~~How the application of the Minimum Requirement(s) restricts the proposed use of the site compared to the restrictions that existed prior to the adoption of the minimum requirements; and~~
- ~~The possible remaining uses of the site if the exception were not granted; and~~
- ~~The uses of the site that would have been allowed prior to the adoption of the minimum requirements; and~~
- ~~A comparison of the estimated amount and percentage of value loss as a result of the minimum requirements versus the estimated amount and percentage of value loss as a result of requirements that existed prior to adoption of the minimum requirements; and~~
- ~~The feasibility for the owner to alter the project to apply the~~

~~minimum requirements. In addition any exception must meet the following~~

~~criteria:~~

- ~~The exception will not increase risk to the public health and welfare, nor injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the State; and~~
- ~~The exception is the least possible exception that could be granted to comply with the intent of the Minimum Requirements.~~

~~If the Permittee chooses to allow jurisdiction-wide exceptions or variances to the requirements of the Manual, those exceptions must be approved by Ecology. Permittees shall keep records of all local exceptions/variances to the Core Elements, pursuant to section S9 *Reporting and Record Keeping Requirements* of this Permit. Project-specific design deviations based on site-specific conditions generally do not require approval of Ecology and are left to the discretion of the Permittee.~~

Section 2. Definitions Related to Core Elements

AADT

Annual Average Daily Traffic

Arterial

A road or street primarily for through traffic. The term generally includes roads or streets considered collectors. It does not include local access roads which are generally limited to providing access to abutting property. See also RCW 35.78.010, RCW 36.86.070, and RCW 47.05.021.

Bioretention BMPs

Engineered stormwater facilities that provide Runoff Treatment by passing the stormwater through a specified soil profile (Bioretention Soil Mix, or BSM), and either retain or detain the treated stormwater for Flow Control. Bioretention facilities include a variety of plant material including trees, shrubs, grasses, and/or other herbaceous plants adapted to the local climate and soil moisture conditions. Bioretention is typically implemented as an LID practice, and as such is typically sited to receive stormwater runoff from a small contributing area.

Certified Erosion and Sediment Control Lead (CESCL)

An individual who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160: Certified Erosion and Sediment Control Lead). A CESCL is knowledgeable in the principles and practices of erosion and sediment control. The CESCL must have the skills to assess site conditions and construction activities that could impact the quality of stormwater and, the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. Certification is obtained through an Ecology approved erosion and sediment control course. Course listings are provided online at Ecology's website.

Commercial agriculture

Those activities conducted on lands defined in RCW 84.34.020(2), and activities involved in the production of crops or livestock for commercial trade. An activity ceases to be considered commercial agriculture when the area on which it is conducted is proposed for conversion to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals, or drainage ditches related to an existing and ongoing agricultural activity.

Converted vegetation (areas)

The surfaces on a project site where native vegetation, pasture, scrub/shrub, or unmaintained non-native vegetation (e.g., Himalayan blackberry, scotch broom) are converted to lawn or landscaped areas, or where native vegetation is converted to pasture.

Effective impervious surface

Those impervious surfaces that are connected via sheet flow or discrete conveyance to a drainage system. Impervious surfaces are considered ineffective if:

1. the runoff is fully dispersed in accordance with BMP F6.42: Full Dispersion;

2. residential roof runoff is infiltrated in accordance with BMP T5.10A: Downspout Full Infiltration; or
3. all runoff from the impervious surface is infiltrated (i.e. calculations show that the 100-yr, 3-hr storm OR the 100-yr, 72-hr storm, whichever is larger, is fully infiltrated).

Erodible or leachable materials

Wastes, chemicals, or other substances that measurably alter the physical or chemical characteristics of runoff when exposed to rainfall. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage.

Hard surface

An impervious surface, a permeable pavement, or a vegetated roof.

Highway

A main public road connecting towns and cities.

Impervious surface

A hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater.

For purposes of determining whether the thresholds for application of Core Elements are exceeded, open, uncovered retention or detention BMPs shall not be considered as impervious surfaces. Open, uncovered retention or detention BMPs shall be considered impervious surfaces for the purposes of runoff modeling.

Land disturbing activity

Any activity that results in movement of earth or a change in the existing soil cover (both vegetative and nonvegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land-disturbing activity. Stormwater facility maintenance is not considered land disturbing activity if conducted according to established standards and procedures.

Low impact development (LID)

A stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Low Impact Development Best Management Practices (LID BMPs)

Distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration.

Low Impact Development (LID) Principles

Land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Maintenance

Repair and maintenance includes activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing and results in no significant adverse hydrologic impact. It includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctional facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure are not changed. One example is the replacement of a collapsed, fish blocking, round culvert with a new box culvert under the same span, or width, of roadway. In regard to stormwater facilities, maintenance includes assessment to ensure ongoing proper operation, removal of built-up pollutants (i.e. sediments), replacement of failed or failing treatment media, and other actions taken to correct defects as identified in the BMP design guidance within Chapter 6 of the SWMMEW. See also Pavement Maintenance exemptions in Section 1. Exemptions.

Native vegetation

Vegetation comprising plant species that are indigenous to eastern Washington and that reasonably could be expected to naturally occur on the site. Plant species classified as noxious weeds are excluded from this definition.

New development

Land disturbing activities, including Class IV-general forest practices that are conversions from timberland to other uses; structural development, including construction or installation of a building or other structure; creation of hard

surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development.

New impervious surface

A surface that is:

- changed from a pervious surface to an impervious surface (e.g. resurfacing by upgrading from dirt to gravel, a bituminous surface treatment ("chip seal"), asphalt, concrete, or an impervious structure); or
- upgraded from gravel to chip seal, asphalt, concrete, or an impervious structure; or
- upgraded from chip seal to asphalt, concrete, or an impervious structure.

Note that if asphalt or concrete has been overlaid by a chip seal, the existing condition should be considered as asphalt or concrete.

On-site stormwater management BMPs

Development and mitigation techniques that serve to infiltrate, disperse, and retain stormwater runoff on a project site. As used in this appendix, a synonym for Low Impact Development BMPs.

Permeable pavement

Pervious concrete, porous asphalt, permeable pavers, or other forms of pervious or porous paving material intended to allow passage of water through the pavement section. It often includes an aggregate base that provides structural support and acts as a stormwater reservoir.

Pervious surface

Any surface material that allows stormwater to infiltrate into the ground. Examples include lawn, landscape, pasture, native vegetation areas, and permeable pavements.

Pollution-generating hard surface (PGHS)

Those hard surfaces considered to be a significant source of pollutants in stormwater runoff. See the listing of surfaces under pollution-generating impervious surface.

Pollution-generating impervious surface (PGIS)

Those impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to any of the following:

- vehicular use (as further defined in this glossary).
- industrial activities (as further defined in the glossary of the SWMMEW).
- storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall.
- metal roofs unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating).
- roofs that are subject to venting significant amounts of dusts, mists, or fumes from manufacturing, commercial (such as restaurants or processing facilities where oils and other solid particles are expected to be expelled), or other indoor activities.

Pollution-generating pervious surface (PGPS)

Any pervious surface subject to any of the following:

- vehicular use (as further defined in this glossary).
- industrial activities (as further defined in the glossary of the SWMMEW).
- storage of erodible or leachable materials, wastes or chemicals, and that receive direct rainfall or run-on or blow-in of rainfall.
- use of pesticides and fertilizers.
- loss of soil.

Typical PGPS include permeable pavement subject to vehicular use, lawns and landscaped areas including: golf courses, parks, cemeteries, and sports fields (natural and artificial turf).

Pre-developed condition

The native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. Jurisdictions may choose to require that either the predeveloped condition or the "existing condition" be used to calculate runoff volumes to be compared to the runoff generated under the "proposed development condition." Because there is limited information available to identify and confirm actual predeveloped conditions for many areas of eastern Washington, jurisdictions may choose to apply a reasonably determined set of conservative curve numbers for use in determining the runoff volume compared to that under the proposed development condition.

Project

Any proposed action to alter or develop a site; or the proposed action of a permit application or an approval that requires drainage review.

Project site

That portion of a property, properties, or right-of-way subject to land disturbing activities, new hard surfaces, or replaced hard surfaces.

Rain garden

A non-engineered shallow landscaped depression, with compost-amended native soils and adapted plants. The depression is designed to pond and temporarily store stormwater runoff from adjacent areas, and to allow stormwater to pass through the amended soil profile. See BMP T5.14: Rain Gardens.

Redevelopment

On a site that is already substantially developed (i.e. has 35% or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities.

Replaced hard surface

For structures, the removal down to (i.e. exposing the top of) the foundation and replacement. For other hard surfaces, the removal down to (i.e. exposing the top of) bare soil or base course and replacement.

Replaced impervious surface

For structures, the removal down to (i.e. exposing the top of) the foundation and replacement. For other impervious surfaces, the removal down to (i.e. exposing the top of) bare soil or base course and replacement.

Site

The area defined by the legal boundaries of a parcel or parcels of land that is (are) subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site.

Source control BMP

A structure or operation intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The SWMMWW separates source control BMPs into two types: structural and operational.

- *Structural Source Control BMPs* are physical, structural, or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater.

- *Operational Source Control BMPs* are non-structural practices that prevent or reduce pollutants from entering stormwater.

Vehicular use

Regular use of an impervious or pervious surface by motor vehicles. The following are subject to regular vehicular use:

- roads,
- un-vegetated road shoulders,
- bike lanes within the traveled lane of a roadway,
- driveways,
- parking lots,
- unrestricted access fire lanes,
- vehicular equipment storage yards,
- light rail elevated and non-elevated guideways/tracks, and
- airport runways.

The following are not considered subject to regular vehicular use:

- sidewalks not subject to drainage from roads for motor vehicles,
- paved bicycle pathways separated from and not subject to drainage from roads for motor vehicles,
- restricted access fire lanes, and
- infrequently used maintenance access roads.

Wetlands

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.

Section 3. Applicability of the Core Elements

3.1 Core Element Thresholds

Not all of the Core Elements apply to every new development or redevelopment project. The applicability varies depending on the project type and size. This section identifies thresholds that determine the applicability of the Core Elements to projects. Use the flow charts in Figure 1: Flow Chart for Determining Whether the Permittee Must Regulate the Project, Figure 2: Flow Chart for Determining Requirements for New Development, and Figure 3: Flow Chart for Determining Requirements for Redevelopment to determine which of the Core Elements apply. The Core Elements themselves are presented in Section 4. Core Elements.

Use the thresholds in sections 3.2 and 3.3 at the time of application for a subdivision, plat, short plat, building permit, or other construction permit. The plat or short plat approval shall identify all stormwater BMPs that are required for each lot. For projects involving only land disturbing activities, (e.g. clearing or grading), the thresholds apply at the time of application for the permit allowing or authorizing that activity. Note the exemption in Section 1. Exemptions for forest practices other than Class IV General.

For projects that are implemented in incremental stages or phases as part of a common plan of development or sale, the thresholds below must be considered for the complete project at full build-out.

Figure 1: Flow Chart for Determining Whether the Permittee Must Regulate the Project

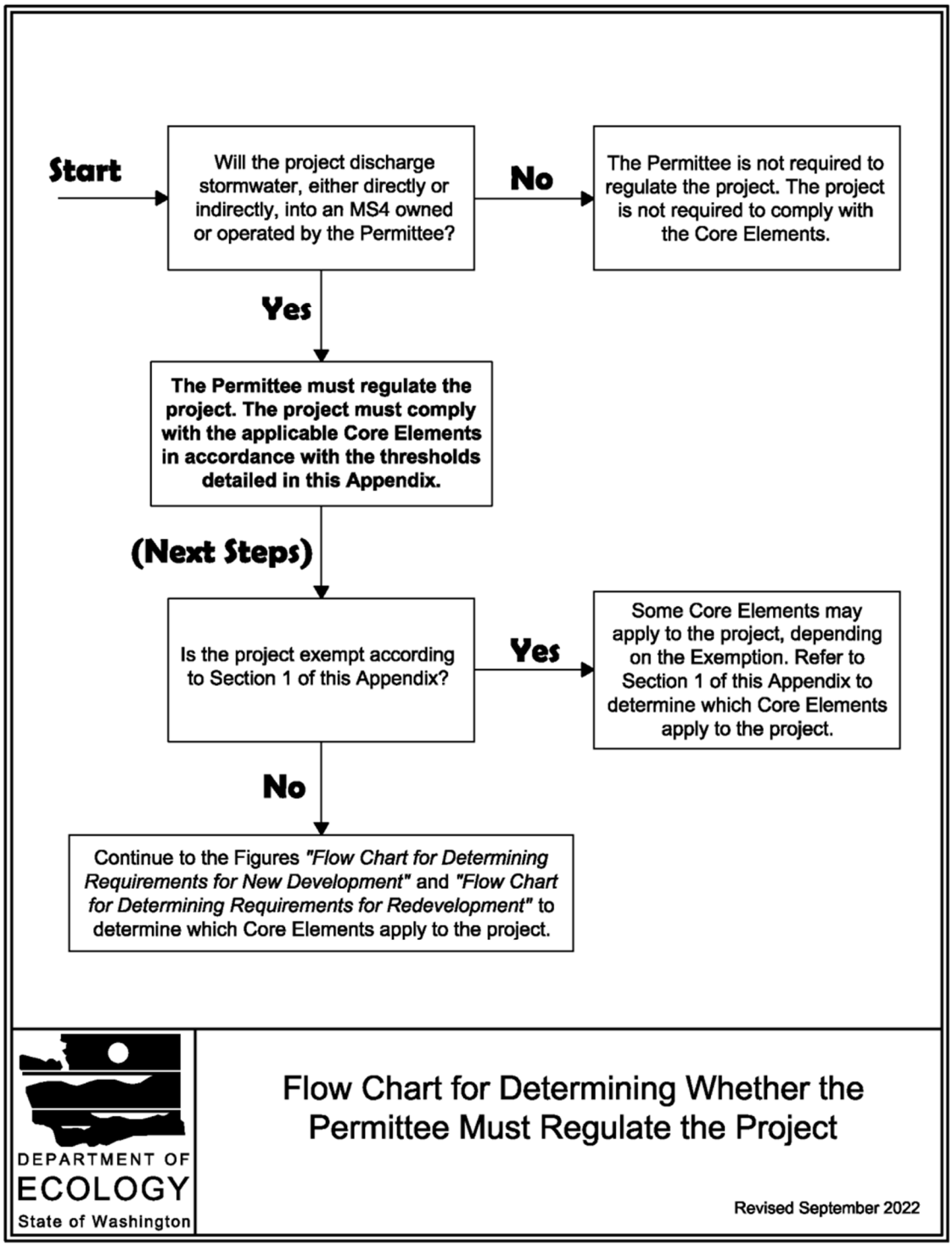


Figure 2: Flow Chart for Determining Requirements for New Development

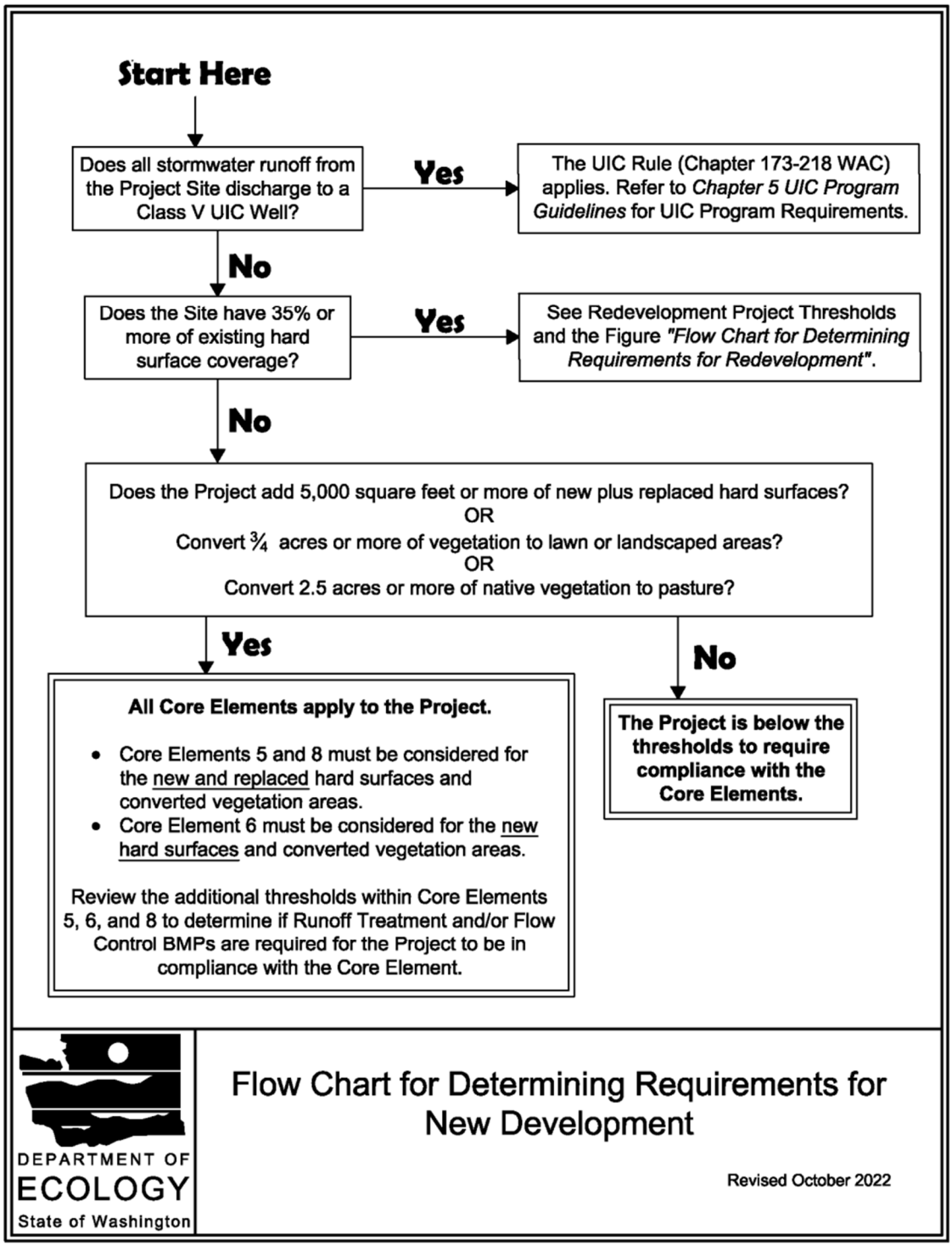
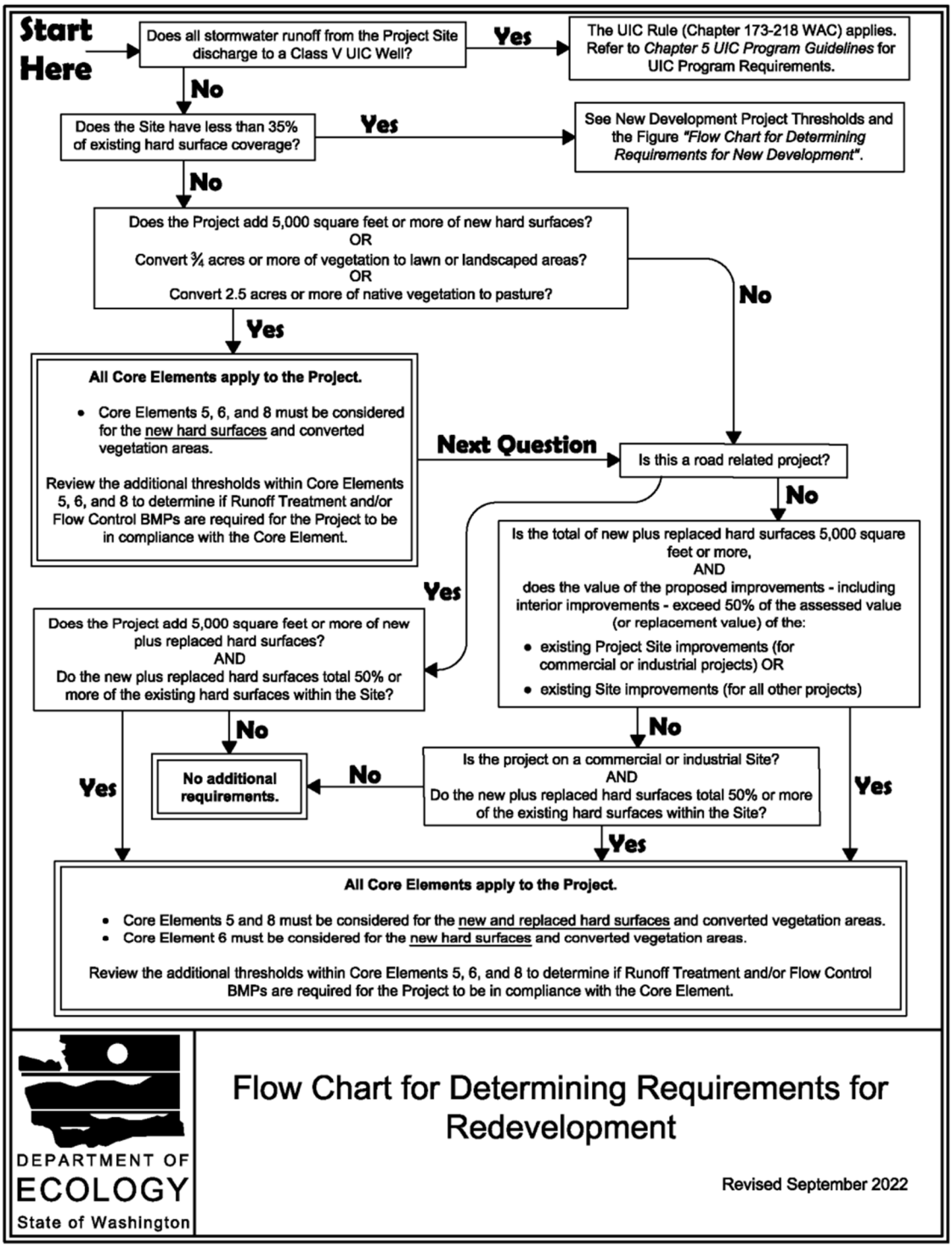


Figure 3: Flow Chart for Determining Requirements for Redevelopment



3.2 New Development Project Thresholds

The following new development shall comply with all Core Elements. Core Elements 5 and 8 must be considered for (i.e. the Core Element Thresholds must be evaluated for)

the new and replaced hard surfaces and converted vegetation areas. Core Element 6 must be considered for the new hard surfaces and converted vegetation areas.

- Results in 5,000 square feet, or more, of new plus replaced hard surface area, or
- Converts ¾ acres, or more, of vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

3.3 Redevelopment Project Thresholds

The following redevelopment shall comply with all Core Elements. Core Elements 5, 6, and 8 must be considered for (i.e. the Core Element Thresholds must be evaluated for) the new hard surfaces and converted vegetation areas.

- Adds 5,000 square feet or more of new hard surfaces or,
- Converts ¾ acres, or more, of vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

3.4 Additional Requirements for Redevelopment

Road-related redevelopment projects shall comply with all Core Elements if they meet both of the following thresholds. If the following thresholds are met, Core Elements 5 and 8 must be considered for (i.e. the Core Element Thresholds must be evaluated for) the new and replaced hard surfaces and converted vegetation areas. Core Element 6 must be considered for the new hard surfaces and converted vegetation areas.

- the new plus replaced hard surfaces total 5,000 square feet or more, and
- the new plus replaced hard surfaces total 50% or more of the existing hard surfaces within the Site.

Other types of redevelopment projects shall comply with all Core Elements if they meet either of the following two thresholds. If either of the following thresholds are met, Core Elements 5 and 8 must be considered for (i.e. the Core Element Thresholds must be evaluated for) the new and replaced hard surfaces and converted vegetation areas. Core Element 6 must be considered for the new hard surfaces and converted vegetation areas.

- Threshold 1:
    - the total of new plus replaced hard surfaces is 5,000 square feet or more, and
        - For commercial or industrial projects: the valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing Project Site improvements.

        - For all other projects: the valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing Site improvements.
- Threshold 2 (for commercial or industrial sites only):
    - the new plus replaced hard surfaces total 50% or more of the existing hard surfaces within the Site.

The local jurisdiction may exempt or institute a stop-loss provision for redevelopment projects from compliance with Core Elements #5, #6, and/or #8 as applied to the replaced hard surfaces if the local jurisdiction has adopted a plan and a schedule that fulfills those requirements in regional facilities.

Section 4. Core Elements

This Section describes the Core Elements for stormwater management at new development and redevelopment sites. Section 3. Applicability of the Core Elements should be consulted to determine which of the Core Elements apply to any given project. Figure 2: Flow Chart for Determining Requirements for New Development and Figure 3: Flow Chart for Determining Requirements for Redevelopment should be consulted to determine whether the Core Elements apply to new surfaces, replaced surfaces, or new and replaced surfaces.

4.1 Core Element #1: Preparation of a Stormwater Site Plan

All projects meeting the thresholds in Section 3. Applicability of the Core Elements shall prepare a Stormwater Site Plan for local government review. Stormwater Site Plans shall use site-appropriate development principles, as required and encouraged by local development codes, to retain native vegetation and minimize impervious surfaces to the extent feasible. Stormwater Site Plans shall be prepared in accordance with the guidance in Chapter 3 in the SWMMEW.

~~Core Element #1: Preparation of a Stormwater Site Plan~~

~~Requirements~~

~~All new development and redevelopment projects that meet the **regulatory threshold** and are subject to the Minimum Technical Requirements shall complete a Stormwater Site Plan (SSP), prepared in accordance with the *Stormwater Management Manual for Eastern Washington*.~~

~~Core Element #~~

4.2 Core Element #2: Construction Stormwater Pollution Prevention Plan (SWPPP)

~~Local jurisdictions~~Permittees may choose to allow ~~projects to comply~~compliance with this Core Element ~~#2~~to be achieved for an individual site ~~by documenting coverage~~if the site is covered under ~~the Ecology's *Construction General Stormwater Permit* ~~ and fully implementing the ~~Construction Stormwater Pollution Prevention Plan elements as required by that permit~~requirements of Ecology's *CONSTRUCTION STORMWATER GENERAL PERMIT - National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activity*. Permittees remain responsible for site inspection and enforcement of the requirements, to ensure that construction operators follow their SWPPPs in accordance with Local Jurisdiction regulations.

Local jurisdictions may choose to allow site operators to apply an Erosivity Waiver to projects disturbing less than five acres that meet the Erosivity Waiver requirements ~~at the end of this section;~~(below); such projects would be waived by the requirement that the jurisdiction review site plans for construction phase stormwater pollution prevention.

~~Requirements~~

All new development and redevelopment projects are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters. ~~Projects meeting the **regulatory threshold** and not qualifying for an Erosivity Waiver, as described at the end of this section, if allowed by the Local Jurisdiction, shall prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activity. The SWPPP shall be implemented beginning with initial soil disturbance and until final stabilization.~~

~~Stormwater BMPs shall be consistent with the *Stormwater Management Manual for Eastern Washington*, or another technical stormwater manual approved by Ecology.~~All projects meeting the thresholds in Section 3. Applicability of the Core Elements and not qualifying for an Erosivity Waiver (as described below, if allowed by the Local Jurisdiction), shall prepare a Construction Stormwater Pollution Prevention Plan (SWPPP) as part of the Stormwater Site Plan for local government review.

Projects below those thresholds are not required to prepare a Construction SWPPP, but must consider all of the Construction SWPPP Elements (listed below) and develop controls for all Construction SWPPP Elements that pertain to the project site.

The Permittee may develop an abbreviated Construction SWPPP format to meet the Construction SWPPP requirement under this permit for project sites that will disturb less than 1 acre.

General Requirements

The Construction SWPPP shall include a narrative and drawings. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The Construction SWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project. Each of the 13 Construction SWPPP Elements (listed below) must be considered and included in the Construction SWPPP unless site conditions render the Element unnecessary and the exemption from that Element is clearly justified in the narrative of the SWPPP.

Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g. subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. These permitted clearing and grading areas and any other areas required to preserve critical or sensitive areas, buffers, native growth protection easements, or tree retention areas (as may be required by local jurisdictions), shall be delineated on the site plans and the development site.

The Construction SWPPP shall be implemented beginning with initial land disturbance and until final stabilization. Sediment and Erosion control BMPs shall be consistent with the BMPs contained in Chapter 7 in the SWMMEW.

Seasonal Work Limitations: From October 1 through June 30, clearing, grading, and other soil disturbing activities shall only be permitted if shown to the satisfaction of the local permitting authority that silt-laden runoff will be prevented from leaving the site through a combination of the following:

1. Site conditions including existing vegetative coverage, slope, soil type and proximity to receiving waters; and
2. Limitations on activities and the extent of disturbed areas; and
3. Proposed erosion and sediment control measures.

Based on the information provided and/or local weather conditions, the local permitting authority may expand or restrict the seasonal limitation on site disturbance.

The following activities are exempt from the seasonal clearing and grading limitations:

1. Routine maintenance and necessary repair of erosion and sediment control BMPs,
2. Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil, and

3. Activities where there is one hundred percent infiltration of stormwater runoff within the site in approved and installed erosion and sediment control facilities.

If erosion and sediment control requirements are not being met (i.e. sediment-laden water is leaving the site), then the local jurisdiction shall require that the contractor maintain the existing BMPs or implement other BMPs as appropriate.

Erosivity Waiver

The Local Jurisdiction may allow construction site operators to qualify for a waiver from the requirement to submit a SWPPP for Local Jurisdiction review if all of the following conditions are met:

1. The site will result in the disturbance of less than 5 acres, and the site is not part of a common plan of development or sale that will disturb 5 acres or greater.
    a. The project's rainfall erosivity factor ("R" Factor) is less than 5 during the period of construction activity, as calculated using the Texas A&M University online rainfall erosivity calculator. The period of construction activity begins at initial earth disturbance and ends with final stabilization.
    b. The entire period of construction activity falls within the following timeframe(s):
        - June 15 through October 15 for sites with mean annual precipitation of 12 inches or more; ***or***
        - No additional timeframe restrictions apply for sites with mean annual precipitation of less than 12 inches.
2. The site or facility has not been declared a significant contributor of pollutants.
3. There are no planned construction activities at the site that will result in non-stormwater discharges.
    - The waiver is allowed by the Local Jurisdiction.
4. The construction site operator notifies the Local Jurisdiction of the intention to apply this waiver at least one week prior to commencing land disturbing activities. The notification must include a summary of the project information used in calculating the project's rainfall erosivity factor (see #2 above) and a certified statement that:
    - The operator will comply with applicable local stormwater requirements; and
    - The operator will implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.

Construction ~~Stormwater Pollution Prevention Plan (~~SWPPP~~)~~ Elements

~~The construction site operator shall include each of the 13 elements below in the narrative of the SWPPP and ensure that they are implemented unless site conditions~~

~~render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.~~

Element 1: Preserve Vegetation~~/~~ / Mark Clearing Limits

a. ~~Prior to~~Before beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.

b. ~~The~~Retain the duff layer, native topsoil, and natural vegetation ~~shall be retained~~ in an undisturbed state to the maximum degree practicable.

Element 2: Establish Construction Access

a. ~~Construction~~Limit construction vehicle access and exit ~~shall be limited~~ to one route, if possible.

b. ~~Access~~Stabilize access points ~~shall be stabilized~~ with a pad of quarry spalls, crushed rock, or other equivalent ~~BMP~~BMPs, to minimize ~~the~~ tracking of sediment onto ~~public~~ roads.

c. ~~Wheel~~Locate wheel wash or tire baths ~~shall be located~~ on site, if the stabilized ~~constructions~~construction entrance is not effective in preventing tracking sediment ~~from being tracked~~ onto ~~public~~ roads.

d. If sediment is tracked off site, ~~roads shall be cleaned~~clean the affected roadway(s) thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather~~. Sediment shall be removed~~). Remove sediment from roads by shoveling ~~or pickup~~, sweeping, or picking up and ~~shall be transported~~ transporting the sediment to a controlled sediment disposal area.

e. ~~Street~~Conduct street washing ~~is allowed~~ only after sediment is removed in accordance with 2.d~~,~~ (above~~. Street~~).

~~e.~~f. Control street wash wastewater ~~shall be controlled~~ by pumping back on site, or otherwise ~~be prevented~~prevent it from discharging into systems tributary to waters of the State.

Element 3: Control Flow Rates

a. ~~Properties~~Protect properties and waterways downstream ~~from development~~of construction sites ~~shall be protected~~ from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site~~, as required by the Local Jurisdiction~~.

b. Where necessary to comply with 3.a~~,~~ (above~~,~~), construct stormwater ~~retention~~infiltration or detention ~~facilities shall be constructed~~BMPs as one of the first steps in grading. ~~Detention facilities shall be functional prior to construction of~~Assure that detention BMPs function properly before constructing site improvements (e.g~~.~~. impervious surfaces).

c. If permanent infiltration BMPs are used for temporary flow control during construction, protect these BMPs ~~should be protected~~ from ~~siltation~~sedimentation during the construction phase.

Element 4: Install Sediment Controls

Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum:

a. Construct sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.

b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

c. Direct stormwater runoff from disturbed areas through ~~a sediment pond~~BMP C241: Sediment Pond (Temporary) or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but ~~shall~~must control flow rates per Element 3: Control Flow Rates~~, above~~.

d. Locate BMPs intended to trap sediment on~~-~~ site in a manner to avoid interference with the movement of juvenile salmonids attempting to ente~~r~~ off-channel areas or drainages.

e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.

f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

Element 5: Stabilize Soils

a. ~~Exposed~~Stabilize exposed and unworked soils ~~shall be stabilized~~ by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

b. ~~No soils shall~~Control stormwater volume and velocity within the site to minimize soil erosion.

c. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.

~~b.~~d. Soils must not remain exposed and unworked for more than the time periods set forth below to prevent erosion:

~~i. At sites with mean annual precipitation greater than or equal to 12 inches:~~

- ~~*10 days* during~~ **All of eastern Washington, except for the Central Basin:**
  - During the dry season (July 1 ~~through~~ September 30~~)~~): 10 days
  - ~~*5 days* during~~During the wet season (October 1 ~~through~~ June 30~~)~~): 5 days

~~ii. At sites with mean annual precipitation less than 12 inches:~~

- ~~*30 days* during~~**The Central Basin:**
  - During the dry season (July 1 ~~through~~ September 30~~)~~): 30 days
  - ~~*15 days* during~~During the wet season (October 1 ~~through~~ June 30~~)~~): 15 days

~~The time period(s) may be adjusted by a Local Jurisdiction, if the jurisdiction can show that local precipitation data justify a different standard.~~

e. ~~Soils shall be stabilized~~Stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.

f. ~~Soil~~Stabilize soil stockpiles ~~must be stabilized~~ from erosion, ~~protected~~protect with sediment trapping measures, and~~,~~ where possible, ~~be located~~locate away from storm drain inlets, waterways and drainage channels.

g. Minimize the amount of soil exposed during construction activity.

h. Minimize the disturbance of steep slopes.

~~f.~~i. Minimize soil compaction and, unless infeasible, preserve topsoil.

Element 6: Protect Slopes

a. Design and construct cut-and-fill slopes in a manner ~~that will~~to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).

b. ~~Off~~Divert off-site stormwater (run-on) or groundwater ~~shall be diverted~~ away from slopes and ~~undisturbed~~disturbed areas with interceptor dikes, pipes and/or swales. Off-site stormwater should be managed separately from stormwater generated on ~~the~~ site.

c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains ~~shall handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.~~must be sized to convey the flow rate calculated by the following method:

- **All of eastern Washington:** The expected peak flow rate from a 6-month, 3-hour storm for the developed condition (referred to as the short-duration storm).

d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.

e. Place check dams at regular intervals within constructed channels that are cut down a slope.

Element 7: Protect Drain Inlets

a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

Element 8: Stabilize Channels and Outlets

a. Design, construct, and stabilize all on-site conveyance channels to prevent erosion from the flow rate calculated by the following method:

- **All of eastern Washington:** The expected peak ~~flows. Channels shall handle the expected peak flow velocity of the~~flow rate from a 6-month, 3-hour storm for the developed condition (referred to as the short-duration storm~~.~~).

b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes~~,~~ and downstream reaches at the outlets of all conveyance systems.

Element 9: Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The project proponent must:

a. Handle and dispose of all pollutants ~~that occur onsite~~, including waste materials and demolition debris~~,~~ that occur on site in a manner that does not cause contamination of stormwater.

b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. ~~On-site fueling tanks shall~~Minimize storage of hazardous materials on-site. Safety Data Sheets (SDS) should be supplied for all materials stored. Chemicals should be kept in their original labeled containers. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume ~~contained in~~of the

largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.

c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. ~~Contaminated~~Clean contaminated surfaces ~~shall be cleaned~~ immediately following any spill incident.

d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, or to the sanitary sewer, with local sewer district approval.

e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. ~~Manufacturers'~~Follow manufacturers' label requirements for application rates and procedures ~~shall be followed~~.

f. Use ~~of~~ BMPs to prevent ~~or treat~~ contamination of stormwater runoff by pH-modifying sources. ~~These~~The sources for this contamination include, but are not limited to: ~~recycled concrete stock piles,~~ bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, recycled concrete stockpiles, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters.

g. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.

~~g.~~h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete ~~struck~~truck drums ~~or concrete handling equipment~~ onto the ground, or into storm drains, open ditches, streets, or streams. Washout of small concrete handling equipment may be disposed of in a formed area awaiting concrete where it will not contaminate surface or groundwater. Do not dump excess concrete on ~~-~~site, except in designated concrete washout areas. Concrete spillage or concrete discharge directly to groundwater or surface waters of the State is prohibited. ~~Do not wash out to formed areas awaiting infiltration BMPs~~At no time shall concrete be washed off into the footprint of an area where an infiltration BMP will be installed.

~~b. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.~~

~~h.~~i. ~~The Permittee shall require construction site operators obtain~~Obtain written approval from Ecology ~~prior to~~before using chemical treatment other than CO_2, dry ice, or food grade vinegar to adjust pH.

~~i.~~j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to

infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).

Element 10: Control ~~De-Watering~~Dewatering

a. Discharge foundation, vault, and trench dewatering water, which have similar characteristics to stormwater runoff at the site, into a controlled conveyance system ~~prior to~~before discharge to ~~a sediment trap~~BMP C240: Sediment Trap or ~~sediment pond.~~BMP C241: Sediment Pond (Temporary).

b. Discharge clean, non-turbid ~~de-watering~~dewatering water, such as well-point groundwater, to systems tributary to, or directly into surface waters of the State, as specified ~~above,~~ in ~~#~~Element 8: Stabilize Channels and Outlets, provided the ~~de-watering~~dewatering flow does not cause erosion or flooding of receiving waters. ~~Clean de-watering~~Do not route clean dewatering water ~~should not be routed~~ through stormwater sediment ~~ponds~~BMPs. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.

c. Handle highly turbid or otherwise contaminated dewatering water separately from stormwater.

d. Other dewatering treatment or ~~de-watering~~ disposal options may include: ~~(i) infiltration; (ii) offsite transport~~

   i. Infiltration.

   ~~i.~~ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters~~; (iii) On-site chemical treatment or other suitable treatment technologies approved by the Local Jurisdiction; (iv) sanitary sewer or combined sewer discharge with local sewer district approval, if there is no other option; or (v) use of a sedimentation bag with outfall to a ditch or swale for small volumes of localized de-watering~~.

   iii. ~~Handle highly turbid or contaminated de-watering water separately from stormwater.~~Ecology-approved on-site chemical treatment or other suitable treatment technologies.

   iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.

   ~~ii.~~v. Use of a sedimentation bag that discharges to a ditch or swale for small volumes of localized dewatering.

Element 11: Maintain BMPs

a. ~~All~~Maintain and repair all temporary and permanent erosion and sediment control BMPs ~~shall be maintained and repaired~~ as needed to ~~assure~~ensure continued performance of their intended function in accordance with BMP specifications.

b. ~~All~~Remove all temporary erosion and sediment control BMPs ~~shall be removed~~ within 30 days after achieving final site stabilization ~~is achieved~~ or after the temporary BMPs are no longer needed.

Element 12: Manage the Project

a. Phase development projects to the maximum degree practicable and ~~shall~~ take into account seasonal work limitations.

b. ~~The Local Jurisdiction must require construction site operators to~~ Inspect, maintain~~,~~ and repair all BMPs as needed~~, all sediment and erosion control BMPs to assure~~ to ensure continued performance of their intended function.

c. ~~The Local Jurisdiction must require construction site operators to periodically inspect their sites. Site~~ Maintain, update, and implement the Construction SWPPP.

~~a.~~ Projects that disturb one or more acres must have site inspections ~~shall be~~ conducted by a Certified Erosion and Sediment Control Lead ~~who shall be identified in the SWPPP and shall~~ (CESCL). Project sites disturbing less than one acre may have a CESCL or a person without CESCL certification conduct inspections. By the initiation of construction, the Construction SWPPP must identify the CESCL or inspector, who must be present on ~~-~~site or on-call at all times.

~~c.~~d. ~~The Local Jurisdiction must require construction site operators to maintain, update and implement their SWPPP. Local Jurisdictions shall require construction site operators to modify their SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.~~

Element 13: Protect Low Impact Development BMPs (Infiltration BMPs)

The project proponent must protect existing and proposed infiltration BMPs during construction. The primary purpose of On-Site Stormwater Management (often referred to as Low Impact Developmet, or LID) is to reduce the disruption of the natural site hydrology through infiltration. LID BMPs are permanent facilities.

a. Protect all infiltration BMPs from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the infiltration BMPs. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the BMP must include removal of sediment and any sediment-laden soils within the BMP and replacing the removed soils with soils meeting the design specification.

b. Prevent compacting infiltration BMPs by excluding construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.

c. Control erosion and avoid introducing sediment from surrounding land uses onto ~~permeable pavements.~~BMP F6.24: Permeable Pavement. Do not allow muddy

construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements ~~or base materials~~.

d. Permeable pavement fouled with sediments or no longer passing an initial infiltration test must be cleaned using procedures from the local stormwater manual or the ~~manufacturer's~~manufacturer's procedures.

e. Keep all heavy equipment off existing soils under infiltration BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

~~Erosivity Waiver~~

~~The Local Jurisdiction may allow construction site operators to qualify for a waiver from the requirement to submit a SWPPP for Local Jurisdiction review if ***all*** of the following conditions are met:~~

~~1. The site will result in the disturbance of less than 5 acres; the site is not a portion of a common plan of development or sale that will disturb 5 acres or greater.~~

~~a. The project's rainfall erosivity factor ("R" Factor) is less than 5 during the period of construction activity, as calculated using the Texas A&M University online rainfall erosivity calculator. The period of construction activity begins at initial earth disturbance and ends with final stabilization.~~

~~b. The entire period of construction activity falls within the following timeframe(s):~~

~~• June 15 through October 15 for sites with mean annual precipitation of 12 inches or more; ***or***~~

~~• No additional timeframe restrictions apply for sites with mean annual precipitation of less than 12 inches.~~

~~2. The site or facility has not been declared a significant contributor of pollutants.~~

~~3. There are no planned construction activities at the site that will result in non-stormwater discharges.~~

~~• The waiver is allowed by the Local Jurisdiction.~~

~~4. The construction site operator notifies the Local Jurisdiction of the intention to apply this waiver at least one week prior to commencing land disturbing activities. The notification must include a summary of the project information used in calculating the project's rainfall erosivity factor (see #2 above) and a certified statement that:~~

~~• The operator will comply with applicable local stormwater requirements; and~~

~~• The operator will implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.~~

4.3 Core Element #3: Source Control ~~Of~~of Pollution

~~Requirements~~

~~All~~ Following construction, all new ~~development~~ and redevelopment projects meeting the ~~**regulatory threshold**~~thresholds in Section 3. Applicability of the Core Elements shall apply all known, available, and reasonable ~~source control~~Source Control BMPs. ~~Operational and structural source control~~

Source Control BMPs shall be selected, designed, and maintained ~~according to~~in accordance with Chapter 8 of the ~~*Stormwater Management Manual for Eastern Washington* or another technical stormwater manual approved by Ecology~~SWMMEW.

4.4 Core Element #4: Preservation ~~Of~~of Natural Drainage Systems and Outfalls

~~Requirements~~

All new development and redevelopment projects meeting the ~~**regulatory threshold** must~~thresholds in Section 3. Applicability of the Core Elements shall preserve and maintain natural drainage ~~systems~~patterns to the maximum extent ~~possible~~practicable at the site. Discharges from the Project Site shall occur at the natural location, to the maximum extent practicable.

The manner by which runoff is discharged from the ~~project site~~Project Site must not cause a significant adverse impact to downstream receiving waters and down-gradient properties, and should be addressed as part of the off-site analysis described in the ~~*Stormwater Management Manual for Eastern Washington*~~SWMMEW.

All outfalls must address energy dissipation ~~as necessary~~. A project proponent who believes that energy dissipation should not be required for a new outfall must provide justification in the project's stormwater site plan ~~or drainage study report.~~.

4.5 Core Element #5: Runoff Treatment

~~Requirements~~

~~Runoff treatment is required for~~All new and redevelopment projects meeting the ~~**regulatory threshold** when the technical~~ thresholds~~/requirements below for Basic~~ in Section 3. Applicability of the Core Elements shall apply Runoff Treatment~~, Metals Treatment, Oil Treatment, or Phosphorus Treatment are met. Treatment facilities shall be selected, designed, sized, constructed, operated, and maintained~~ BMPs in accordance with ~~this Core Element~~the following thresholds, standards, and ~~the guidance in Chapters 4 and 5 of the *Stormwater Management Manual for Eastern Washington*, or another technical~~requirements to remove pollutants from

stormwater ~~manual approved by Ecology.~~

~~All Permittees must require~~ runoff ~~treatment facilities to be sized for the applicable design storm(s) described in this section. Each jurisdiction must identify a preferred method or methods for sizing treatment facilities or provide alternative guidance. All runoff treatment facilities must be sized for the entire flow that is directed to them.~~

~~When Core Element #5 *Runoff Treatment* is required, Core Element #7 *Operation and Maintenance* also is required~~.

Core Element Thresholds

Each project that requires Core Element #5 (as detailed in Section 3. Applicability of the Core Elements) must be reviewed to determine if Runoff Treatment BMPs are required for the project to be in compliance with Core Element #5.

Note that it is possible for a project that triggers the thresholds for Core Element #5 per Section 3. Applicability of the Core Elements to not need Runoff Treatment BMP(s) to be in compliance with Core Element #5. If a project does not trigger either of the Core Element thresholds for Runoff Treatment BMPs, then the designer must document the areas within the project used to determine that neither of the Core Element thresholds are met. This documentation will demonstrate compliance with Core Element #5 for the project.

When assessing a project against the following thresholds, only consider the types of surfaces (e.g. new hard surfaces, replaced hard surfaces, converted vegetation areas) that are subject to Core Element #5, per the Project Thresholds in Section 3. Applicability of the Core Elements.

The following projects require construction of Runoff Treatment BMPs. If a project meets either of the following thresholds, Runoff Treatment BMPs are required. The project proponent must demonstrate that the project does not meet either of the following thresholds for Runoff Treatment BMPs to not be required for the project.

- Projects that have a total of 5,000 square feet or more of pollution-generating hard surface (PGHS), or
- Projects that have a total of 3/4 of an acre or more of pollution-generating pervious surfaces (PGPS) – not including permeable pavements, and from which there will be a surface discharge in a natural or man-made conveyance system from the site.

Runoff Treatment Performance Goal Thresholds

1a. Level 1 Oil Control

Level 1 Oil Control BMPs are required for areas that typically generate high concentrations of oil due to high traffic turnover or the frequent transfer of oil. These types of areas include:

- An area of a commercial or industrial site subject to an expected average daily traffic (ADT) count equal to or greater than 100 vehicles per 1,000 square feet of gross building area, or 300 total trip ends per day.
- An area of a commercial or industrial site subject to petroleum storage and transfer in excess of 1,500 gallons per year, not including routinely delivered heating oil.
- An area of a commercial or industrial site subject to parking, storage or maintenance of 25 or more vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.).
- A road intersection with a measured ADT count of 25,000 vehicles or more on the main roadway and 15,000 vehicles or more on any intersecting roadway, excluding projects proposing primarily pedestrian or bicycle use improvements.

1b. Level 2 Oil Control

Level 2 Oil Control BMPs are required for areas that generate sufficient quantities of oil to threaten water quality, but the quantities of oil generated may be insufficient for Level 1 Oil Control BMPs to be effective. These types of areas include:

- Any road with average daily traffic (ADT) > 30,000 vehicles
- Commercial on-street parking areas on streets with an expected total ADT of ≥ 7,500

2. Phosphorus Treatment

Phosphorus Treatment BMPs are required for projects (or portions of projects) within watersheds that have been determined by local governments (e.g. through a lake management plan), Ecology (e.g. through a TMDL waste load allocation), or the USEPA to be sensitive to phosphorus and are being managed to control phosphorus. The following are examples of sources that the local government can use for determining whether a water body is sensitive to phosphorus:

- Those waterbodies reported under section 305(b) of the Clean Water Act, and designated as not supporting beneficial uses due to phosphorous or other water quality criteria related to excessive phosphorus;
- Those listed in Washington State's Nonpoint Source Assessment required under section 319(a) of the Clean Water Act due to nutrients.

3. Metals Treatment

Metals Treatment BMPs are required for the types of project sites listed below that:

a. discharge directly to fresh waters designated for aquatic life use or that have an existing aquatic life use; or
b. discharge to conveyance systems that are tributary to fresh waters designated for aquatic life use or that have an existing aquatic life use; or
c. infiltrate stormwater within ¼ mile of a fresh water designated for aquatic life use or that has an existing aquatic life use.

The types of project sites are:

- Sites subject to industrial activities,
- Commercial project sites,
- Multifamily residential project sites, and
- High AADT roads as follows:
    - Within Urban Growth Areas:
        - Roads with an AADT of 7,500 or greater.
    - Outside of Urban Growth Areas:
        - Roads with an AADT of 15,000 or greater
- Light rail elevated and non-elevated guideways/tracks
- Other project sites that are anticipated to generate a high pollutant loading, including:
    - Parking areas as follows:
        - Commercial or industrial areas: All on-street parking areas.
        - Areas other than commercial or industrial areas: On-street parking areas on streets with an expected total AADT of ≥ 7,500.
        - Parking areas with an expected trip end count ≥ 40 vehicles per 1,000 sf of gross building area.
        - Parking areas with ≥ 100 expected trip ends per day.
    - Fueling stations
    - Log storage and sorting yards
    - Railroad yards
    - Transit center bus stops

The following areas of the above-listed project sites do not require Metals Treatment BMPs:

- Areas that discharge directly, or indirectly through a municipal separate storm sewer system, to a water listed in *Appendix 2-A: Basic Treatment Receiving Waters* in the SWMMEW.

- Landscaped areas of industrial, commercial, and multi-family project sites that do not involve any other pollution-generating sources (e.g. industrial activities, customer parking, storage of erodible or leachable material, wastes, or chemicals).
- Parking lots of industrial and commercial project sites, dedicated solely to parking of employees' private vehicles that do not involve any other pollution-generating sources (e.g. industrial activities, customer parking, storage of erodible or leachable material, wastes, or chemicals).

For project sites with a mix of land use types, Metals Treatment BMPs are required when the runoff from the areas subject to the Metals Treatment Performance Goal comprises 50% or more of the total runoff from the project site.

4. Basic Treatment

Areas that must provide Phosphorus Treatment BMPs or Metals Treatment BMPs do NOT have to provide additional Basic Treatment BMPs to meet the Basic Treatment Performance Goal.

If Phosphorus Treatment BMPs or Metals Treatment BMPs are not provided, Basic Treatment BMPs are required before discharging runoff off site through either infiltration or surface flow.

For project sites with a mix of land use types, Basic Treatment BMPs are required when the runoff from the areas subject to the Basic Treatment Performance Goal comprises 50% or more of the total runoff to a discharge location.

~~Basic Treatment~~

~~Basic runoff treatment (to remove solids) is required for all **new development** projects creating 5,000 square feet or more of **pollutant-generating impervious surface** (PGIS) areas. Treatment is required for discharges to all surface waters of the State, including perennial and seasonal streams, lakes and wetlands where the PGIS threshold is met. Runoff treatment is also required for discharges of stormwater to ground where the vadose zone does not provide adequate treatment capacity (see Chapter 5.6 the *Stormwater Management Manual for Eastern Washington* (2004), or another technical stormwater manual approved by Ecology).~~

~~Basic runoff treatment is required for **redevelopment** projects creating 5,000 square feet or more of~~
~~**PGIS** where:~~

- ~~The project takes place at an industrial site as defined by EPA (40 CFR~~

122.26(b)(14)) with outdoor handling, processing, storage, or transfer of solid raw materials or finished products, or

- The project takes place at a commercial site with outdoor storage or transfer of solid raw materials or treated wood products, or
- A need for additional stormwater control measures has been identified through a TMDL or other water cleanup plan or other planning process, or
- The project takes place at a high-use site, or
- The project takes place in an area subject to vehicular traffic under any of the following conditions:
  - The project improves a soft shoulder to a curb and gutter roadway with projected **average daily traffic** (ADT) of 7,500 or more vehicles.
  - The project replaces and/or improves the surface of a parking area where the projected number of **trip ends** exceeds 40 per 1,000 square feet of building area or 100 total trip ends per day.
  - The project replaces and/or improves the surface of an **urban road** where the projected ADT is 7,500 or more vehicles per day.
  - The project replaces and/or improves the surface of a **freeway** or **rural road** where the projected ADT is 15,000 or more vehicles per day.
  - The project affects the area within 500 feet of a controlled intersection on a limited access control highway with projected ADT of 7,500 or more vehicles per day. Only this area must be treated.

Exceptions: Non-pollutant generating impervious surface (NPGIS) areas are exempt from basic treatment requirements unless the runoff from these areas is not separated from the runoff generated from PGIS areas. All runoff treatment facilities must be sized for the entire flow that is directed to them.

Projects that meet the requirements for dispersal and infiltration (see Chapter 6 of the *Stormwater Management Manual for Eastern Washington* (2004), particularly BMP T5.30) and do not meet the thresholds for requiring oil treatment are exempt from basic treatment requirements. Discharges to surface water from projects with a total PGIS area <5,000 square feet are exempt from basic treatment requirements unless those areas are subject to the storage or handling of hazardous substances, materials or wastes as defined in 49 CFR 171.8, RCW 70.105.010, and/or RCW 70.136.020.

Preservation/maintenance projects and some improvement or safety enhancement projects that do not increase motorized vehicular capacities as defined in the sections "Exemptions" and "Partial Exemptions" above, are exempt from Basic Treatment Requirements.

Certain exemptions may exist for Category 4 wetlands (see the section "Use of Existing Wetlands to Provide Runoff Treatment" at the end of this Core Element).

Any of these exemptions may be negated by requirements set forth in a Total Maximum Daily Load (TMDL) or other water cleanup plan.

Metals Treatment

Metals treatment is required in addition to basic treatment for ***new development projects*** with ***moderate use sites, high use sites***, and sites that meet any of the following definitions:

- Industrial sites as defined by EPA (40 CFR 122.26(b)(14)) with benchmark monitoring requirements for metals; or industrial sites subject to handling, storage, production, or disposal of metallic products or other materials, particularly those containing arsenic, cadmium, chromium, copper, lead, mercury, nickel or zinc.
- On-street parking areas of municipal streets in commercial and industrial areas.
- Highway rest areas.
- Runoff from metal roofs not coated with an inert, non-leachable material.

Metals treatment is required in addition to basic treatment for ***redevelopment*** projects with ***high use sites*** or ***high ADT roadways and parking areas*** and for projects where:

- An additional need for stormwater control measures to remove metals has been identified through a TMDL or other water cleanup plan, or
- The project takes place at an industrial site that is subject to benchmark monitoring for metals.

Exceptions: Unless a specific water quality problem has been identified, the following discharges are exempt from metals treatment requirements:

- Discharges to non-fish-bearing streams.
- Direct discharges to the main channels of the following rivers and direct discharges to the following lakes: Banks Lake, Lake Chelan, Columbia River, Grande Ronde River, Kettle River, Klickitat River, Methow River, Moses Lake, Potholes Reservoir, Naches River, Okanogan River, Pend Oreille River, Similkameen River, Snake River, Wenatchee River, and Yakima River.
- Subsurface discharges, unless identified as hydraulically connected to surface waters of the State.
- Restricted residential and employee-only parking areas, unless subject to through traffic.

Preservation/maintenance projects and some improvement or safety enhancement projects that do not increase motorized vehicular capacities as defined in the sections "Exemptions" and "Partial Exemptions" above are exempt from Metals Treatment Requirements.

Certain exemptions may also apply to Category 4 wetlands (see "Use of Existing Wetlands to Provide Runoff Treatment" at the end of this section).

Any of these exemptions may be negated by requirements set forth in a Total Maximum Daily Load (TMDL) or other water cleanup plan.

Oil Treatment

Oil treatment is required for *all* ***high-use sites*** *and* ***high ADT roadways and parking areas*** at ***new development*** *and* ***redevelopment*** projects. Some sites will require a spill control type of oil control facility (see Chapter 8 of the *Stormwater Management Manual for Eastern Washington*) for source control separately from or in addition to this treatment requirement. Oil treatment/ control is required in addition to any other runoff treatment required per this Core Element.

Separator technologies for oil treatment are required only for the following high-use sites:

- High-density intersections with expected ADT of 25,000 or more vehicles on main roadway and 15,000 or more vehicles on any intersecting roadway,
- Non-employee parking areas of commercial or industrial sites with trip end counts greater than 100 vehicles per 1,000 SF gross building area,
- Areas of commercial and industrial sites subject to use, storage, or maintenance of a fleet of 25 or more vehicles that are over ten tons gross weight,
- Fueling stations and facilities, and
- Sites subject to petroleum transfer in excess of 1,500 gallons per year, not including routinely delivered heating oil.

For the following sites, a catch basin preceded by passive oil control vault, such as a chamber with a turned-down elbow, may be applied in lieu of an approved separator technology as long as they are inspected/maintained/cleaned at least once per year or more frequently as needs are identified:

- A customer or visitor parking lot with an expected trip end count equal to or greater than 300 vehicles (best professional judgment should be used in comparing this criterion with the preceding criterion); and
- Commercial on-street parking areas on streets with an expected total ADT count equal to or greater than 7,500.

At all other high-use sites and high ADT traffic areas subject to the oil treatment requirement, sorptive technologies, not separators, are required. Basic treatment methods with sorptive properties, such as swales or filters, may be selected to fulfill this requirement; or catch basin inserts may be used at these sites. A catch basin preceded by passive oil control vault, such as a chamber with a turned-down elbow, may be applied at sites with ADT greater than 30,000 as long as they are inspected/maintained/cleaned at least once per year or more frequently as needs are identified.

High-use roadway intersections shall treat lanes where vehicles accumulate during the signal cycle, including left and right turn lanes and through lanes, from the beginning of the left turn pocket. If no left turn pocket exists, the treatable area shall begin at a distance equal to three car lengths from the stop line. If runoff from the intersection drains to more than two collection areas that do not combine within the intersection,

treatment may be limited to any two of the collection areas where the cars stop.

High-use sites and high ADT roadways and parking areas must treat runoff from the high-use portion of the site using oil control treatment options in the *Stormwater Management Manual for Eastern Washington* prior to discharge or infiltration. For high-use sites located within a larger project area, only the impervious area associated with the high-use site is subject to oil control treatment, but the flow from that area must be separated; otherwise the treatment controls must be sized for the entire area.

Exceptions: Preservation/maintenance projects and some improvement or safety enhancement projects that do not increase motorized vehicular capacities as defined in the sections "Exemptions" and "Partial Exemptions" above are exempt from Oil Treatment Requirements.

Any of these exemptions may be negated by requirements set forth in a Total Maximum Daily Load (TMDL) or other water cleanup plan.

Phosphorus Treatment

Requirements: Phosphorus treatment is required only where federal, state, or local government has determined that a water body is sensitive to phosphorus and that a reduction in phosphorus from new development and redevelopment is necessary to achieve the water quality standard to protect its beneficial uses. Where it is deemed necessary, a strategy shall be adopted to achieve the reduction in phosphorus.

Treatment Facility Selection

Treatment facilities must be selected in accordance with the guidance in Chapter 5 of the *Stormwater Management Manual for Eastern Washington*, or another technical stormwater manual approved by Ecology, to meet the treatment requirements identified for the project's proposed land use and site conditions.

Runoff Treatment BMP Sizing

(Note the subheading directly above is not in the 2019 document, but was manually inserted when creating redlines in an effort to generate "clean" redlines for review)

Treatment Facility Sizing

Each treatment BMP is sized based on a water quality design volume, or a water quality design flow rate. Permittees shall adopt criteria to provide for consistent sizing of treatment facilities.

~~Computational methods for predicting runoff volumes and flow rates for a proposed development condition are included in Chapter 4 of the *Stormwater Management Manual for Eastern Washington*. Specific design criteria for treatment facilities may be taken from Chapter 5 of the *Stormwater Management Manual for Eastern Washington,* or another technical stormwater manual approved by Ecology. Specifically, public road projects may be designed using BMPs in the current version of the Washington State Department of Transportation *Highway Runoff Manual,* approved by Ecology.~~

Size Runoff Treatment BMPs for the entire area that drains to them, even if some of those areas are not pollution-generating, or were not included in the Project Thresholds decisions.

Runoff Treatment BMPs are sized by using either a volume (the Water Quality Design Volume~~: Each Permittee shall specify which of the following methods will be used~~) or a flow rate (the Water Quality Design Flow Rate), depending on the Runoff Treatment BMP selected. Refer to the selected Runoff Treatment BMP to determine ~~treatment volumes in their jurisdiction. Different methods may be specified for different types of projects.~~whether the BMP is sized based on a volume or a flow rate. See below for details about the Water Quality Design Volume~~ based treatment BMPs are sized~~ and the Water Quality Design Flow Rate used to size Runoff Treatment BMPs.

Water Quality Design Volume

The Water Quality Design Volume is the same whether the Runoff Treatment BMP is located upstream or downstream ~~from detention facilities.~~of Detention BMPs.

~~***Runoff Volume***~~ Each agency or local jurisdiction should specify which of the following methods will be used in their jurisdiction to determine the Water Quality Design Volume. If the jurisdiction has not identified a preferred method, the default method shall be Method 1 in Climate Regions 1 and 4, and Method 2 in Climate Regions 2 and 3.

- **Method 1:** The volume of runoff predicted for the proposed development condition from the regional storm (72-hour) with a 6-month return frequency. An alternative to this method is the modified Type IA storm with a 6-month return frequency described in *Chapter 4*~~.2 of~~ *- Hydrologic Analysis and Design* in the ~~*Stormwater Management Manual for Eastern Washington;*~~SWMMEW. Designers may use this alternative method~~ is intended for use~~ on small projects where the designer's software does not accept storms longer than 24 hours.
- ~~***Runoff Volume***~~ **Method 2:** The volume of runoff predicted for the proposed development condition from the SCS Type IA 24~~-~~-hour storm with a 6~~-~~-month return frequency.
- ~~***Runoff Volume***~~ **Method 3:** In Climate Regions 2 and 3, volume-based ~~facilities~~Runoff Treatment BMPs may be sized for 0.5-inch predicted runoff produced for the proposed development condition from all impervious surface areas that contribute flow to the ~~treatment facility. (~~Runoff Treatment BMP. This

method ~~may be~~is modified for design of BMP T5.~~30 Bio-infiltration swale in Chapter 5 of the *Stormwater Management Manual for Eastern Washington.*)~~21: Infiltration Swales.

- ~~***Runoff Volume***~~ **Method 4:** The volume of runoff predicted for the proposed development condition from the SCS Type II 24-hour storm with a 6~~-~~-month return frequency.
- ~~***Runoff Volume***~~ **Method 5:** Another sizing approach and criteria based on peer-reviewed methods and supported by local data that meet the objective of treating at least 90% of the average annual runoff volume ~~of runoff~~ from the site~~. Snowmelt should be considered in determining the water quality design volume if this method is selected~~.

Snowmelt considerations: Snowmelt should be considered when determining the Water Quality Design Volume. This is especially important in Climate Regions 1 and 4 and also applies to other areas of eastern Washington. Check for local requirements. A snowmelt factor based on the water content of the average annual daily depth of snow (or based on some other appropriate measurement) should be added to the depth of precipitation when calculating the Water Quality Design Volume, or another method described in *Chapter 4 - Hydrologic Analysis and Design* in the SWMMEW may be used.

Water Quality Design Flow Rate~~:~~

The Water Quality Design Flow~~-rate-based treatment~~ Rate is dependent on the location of the Runoff Treatment BMP relative to Detention BMP(s):

- *Upstream of Detention* *BMPs or when there* *are* ~~sized differently depending on whether they are located upstream or downstream from detention facilities, if detention is required. For runoff treatment facilities sited downstream of detention facilities, the design flow rate is the full 2-year, release rate of the detention facility. For runoff treatment facilities preceding detention facilities or when detention facilities are not required, each Permittee shall~~ *no Detention BMPs:*

  Each agency or local jurisdiction should specify which of the following methods will be used ~~to determine flow rates in~~ in their jurisdiction~~. Different methods may be specified for different types of projects.~~ to determine the Water Quality Design Flow Rate preceding Detention BMPs. If the jurisdiction has not identified a preferred method, the default method shall be Method 1 in all climate regions. For large ~~facilities~~Runoff Treatment BMPs receiving inflow from multiple sources, the flow rate generated by the regional or SCS Type IA storm should also be checked.

  - ~~***Flow Rate***~~ **Method 1:** The runoff flow rate predicted for the proposed development condition from the short-duration (3-hour) storm with a 6~~-~~-month return frequency. ~~Time intervals for some facilities are~~(Use 15

minute time steps, unless otherwise specified in the BMP design ~~requirements in the *Stormwater Management Manual for Eastern Washington.*~~guidance.)

- ~~***Flow Rate***~~ **Method 2:** The runoff flow rate predicted for the proposed development condition from the SCS Type II 24~~-~~-hour storm with a 6~~-~~-month return frequency. ~~Time intervals for some facilities are~~(Use 15 minute time steps, unless otherwise specified in the BMP design ~~requirements in the *Stormwater Management Manual for Eastern Washington.*~~guidance.)
- ~~***Flow Rate***~~ **Method 3:** The runoff flow rate for the proposed development condition calculated by the Rational Method using the 2~~-year Mean Recurrence Interval (see the *Stormwater Management Manual for Eastern Washington*).~~-year mean recurrence interval. This method may only be used to design facilities based on instantaneous peak flow rates.

- *Downstream of Detention BMPs:* The Water Quality Design Flow Rate shall be the full 2-year release rate from the Detention BMP.

Runoff Treatment BMP Selection, Design, and Maintenance

Runoff Treatment BMPs shall be:

- Selected in accordance with the process identified in *6.1.2 Choosing Your Runoff Treatment BMPs* in the SWMMEW,
- Designed in accordance with the design criteria in Chapter 6 of the SWMMEW, and
- Maintained in accordance with the maintenance criteria in Chapter 6 of the SWMMEW.

Bypass Requirements

A bypass must be provided for all ~~treatment~~Runoff Treatment BMPs unless the ~~facility~~BMP is able to convey the 25-year short-duration storm without damaging the BMP or dislodging pollutants from within it. Extreme runoff events may produce high flow velocities through BMPs that can damage and or dislodge pollutants from within the facility. The designer must: check the maximum allowable velocity (typically less than 2 ft/s) or shear stress specified for the BMP; and implement a flow bypass as necessary to prevent exceeding these velocities. Bypass is not recommended for wet ponds, constructed wetlands, and similar volume-based ~~treatment facilities~~Runoff Treatment BMPs; inlet structures for these ~~facilities~~BMPs should be designed to dampen velocities; the pond dimensions will further dissipate the energy.

~~Use of Existing Wetlands to Provide Runoff Treatment~~

~~Stormwater treatment facilities are not allowed within a wetland or its natural vegetated buffer except for:~~

- ~~Necessary conveyance systems approved by the local government; or~~
- ~~As allowed in a wetland mitigation plan; or~~
- ~~When the requirements below are met.~~

~~A wetland can be considered for use in stormwater treatment if:~~

- ~~The wetland meets the criteria for "Hydrologic Modification of a Wetland" in Core Element #4~~.6 ~~Flow Control; ***and either***~~
- ~~It is a Category 4 wetland according to the *Eastern Washington Wetland Rating System;* ***or***~~
- ~~It is a Category 3 wetland according to the *Eastern Washington Wetland Rating System* ***and*** the wetland has been previously disturbed by human activity, as evidenced by agriculture, fill areas, ditches *or* the wetland is dominated by introduced or invasive weedy plant species as identified in the rating analysis.~~

~~Basic treatment is required prior to discharge to Category 3 wetlands; a Category 3 wetland that meets the above requirements may be used to meet metals treatment requirements. Oil control is required for a discharge to wetlands if the Technical Thresholds/Requirements are met.~~

~~Mitigation shall be required for the impact of using a wetland as a stormwater treatment facility. Appropriate measures include enhancement, expansion and/or preservation of a buffer around the wetland.~~

Core Element #6: Flow Control

~~Requirements~~

~~New development projects that meet the ***regulatory threshold*** and result in 10,000 square feet or more of new impervious surfaces shall construct stormwater flow control facilities for any discharge of stormwater directly, or through a conveyance system, into surface water. Redevelopment projects are not required to construct stormwater flow control facilities unless required under a basin plan or other federal, state, or local requirement.~~

~~The stormwater flow control facility shall be designed to protect stream morphology and associated instream habitat from adverse impacts due to increased peak flows and flow durations following development. Flow control facilities shall be selected, designed, constructed, operated and maintained according to criteria established by the Local Jurisdiction.~~

~~In order to prevent localized erosion, energy dissipation at the point of discharge~~

~~is required for all projects unless site-specific conditions warrant an exception.~~

~~When Core Element #6 *Flow Control* is required, Core Element #7 *Operation and Maintenance* also is required.~~All new and redevelopment projects meeting the thresholds in Section 3. Applicability of the Core Elements shall apply Flow Control BMPs in accordance with the following thresholds, standards, and requirements to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions.

~~Exemptions~~

Core Element Exemption

~~Direct discharges~~ Flow Control is not required for projects that discharge directly to, or indirectly through an MS4 to a water listed in *Appendix 2-C: Flow Control Exempt Receiving Waters* in the SWMMEW, subject to all of the following restrictions:

- Stormwater runoff should not be diverted from the project area to an existing wetland, stream, or near-shore habitat sufficient in quantities large enough to result in significant adverse impact. Adverse impacts are expected from uncontrolled flows causing a significant increase or decrease in the 1.5- to 2-year peak flow rate.
- The project must be drained by a conveyance system that is comprised entirely of manmade conveyance elements (e.g. pipes, ditches, outfall protection). The conveyance system must extend to the ordinary high water line of the exempt receiving water, or (in order to avoid construction activities in sensitive areas) flows are properly dispersed before reaching the buffer zone of the sensitive or critical area.
- The conveyance system between the project and the exempt receiving water shall have sufficient hydraulic capacity to convey discharges from future build-out conditions (under current zoning) from contributing areas of the Site, and the existing condition from contributing off-site areas.
- Any erodible elements of the manmade conveyance system must be adequately stabilized to prevent erosion under the conditions noted above.

Additionally, the following projects do not need to provide additional Flow Control BMPs to comply with this Core Element:

- Any project able to disperse (i.e. by using BMP F6.42: Full Dispersion), without discharge to surface waters ~~are exempt from flow~~, the total 25-year runoff volume for the proposed development condition on property that is under the functional control ~~requirements to protect stream morphology:~~of the project proponent.

~~1. Any river or stream that is:~~

- ~~Fifth order or greater as determined from a 1:24,000 scale map; or~~
- ~~Fourth order or greater as determined from a 1:100,000 or larger scale map.~~

~~The maps should be standard USGS maps or GIS data sets derived from USGS base maps.~~

2. ~~Any lake or reservoir with a contributing watershed area greater than 100 square miles.~~
3. ~~Reservoirs with outlet controls that are operated for varying discharges to the downstream reaches as for hydropower, flood control, irrigation, or drinking water supplies. Uncontrolled, flow-through impoundments are not exempt.~~

- ~~Streams~~A road project able to disperse (i.e. by using BMP F6.42 Full Dispersion), without discharge to surface waters, the total 25-year runoff volume for the proposed development condition on land for which this use has been specifically authorized by the controlling entity.
- A project discharging to stream reaches consisting primarily of irrigation return flows and not providing habitat for fish spawning and rearing.
- A project located at a site with less than 10 inches of average annual rainfall that discharges to a seasonal stream that is not connected via surface flow to a nonexempt surface water by runoff generated by the 2-year Type IA design storm.
- A project that ~~flow~~discharges to a stream that flows only during runoff-producing events. The runoff carried by the stream following the 2-year~~,~~ regional storm in Climate Regions 1 and 4, or the Type IA ~~rainfall event~~storm in Climate Regions 2 and 3, must not discharge via surface flow to a ~~non-exempt~~nonexempt surface water. ~~To be exempt, the~~The stream may carry runoff during an average annual snowmelt event but must not have a period of ~~baseflow~~base flow during a year of normal precipitation.

Core Element Thresholds

Each project that requires Core Element #6 (as detailed in Section 3. Applicability of the Core Elements) must be reviewed to determine if Flow Control BMPs are required for the project to be in compliance with Core Element #6.

Note that it is possible for a project that triggers the thresholds for Core Element #6 per Section 3. Applicability of the Core Elements to not need Flow Control BMP(s) to be in compliance with Core Element #6. If a project does not trigger either of the Core Element thresholds for Flow Control BMPs, then the designer must document the areas within the project used to determine that neither of the Core Element thresholds are met. This documentation will demonstrate compliance with Core Element #6 for the project.

When assessing a project against the following thresholds, only consider the types of surfaces (e.g. new hard surfaces, replaced hard surfaces, converted vegetation areas)

that are subject to Core Element #6, per the Project Thresholds in Section 3. Applicability of the Core Elements.

The following projects require construction of Flow Control BMPs to achieve the Flow Control Performance Standard. If a project meets any of the following thresholds, Flow Control BMPs are required. The project proponent must demonstrate that the project does not meet any of the following thresholds for Flow Control BMPs to not be required for the project.

- Projects that have a total of 10,000 square feet or more of effective impervious surfaces, or
- Projects that convert ¾ acres or more of native vegetation, pasture, scrub/shrub, or unmaintained non-native vegetation to lawn or landscape, or convert 2.5 acres or more of native vegetation to pasture, and from which there is a surface discharge in a natural or man-made conveyance system from the project, or
- Projects that through a combination of effective hard surfaces and converted vegetation areas cause a 0.15 cubic feet per second (cfs) or greater increase in the runoff for the 25-year, 24-hour, storm event (using a 15 minute time-step).

  The 0.15 cfs increase should be a comparison of the post project runoff to the existing condition runoff. For the purpose of applying this threshold, the existing condition is either the pre-project land cover, or the land cover that existed at the site as of a date when the local jurisdiction first adopted Flow Control requirements into code or rules.

Flow Control Performance Standard

Projects must limit the peak release rate of the post-developed 2-year, 24-hour peak flow to 50% of the pre-developed 2-year, 24-hour peak flow and maintain the pre-developed 25-year, 24-hour peak runoff rate. Check the 100-year, 24-hour event for downstream flooding and property damage.

Additionally, the 10-year, 24-hour rainfall event must be retained on-site without any discharge to the MS4.

The above requirements must be demonstrated using a single-event model.

The pre-developed condition used for the analysis shall be the existing land cover.

Alternative Flow Control Performance Standard

An alternative Flow Control Performance Standard may be established through application of watershed-scale hydrologic modeling and supporting field observations. Possible reasons for an alternative Flow Control Performance Standard include:

- Establishment of a stream–specific threshold of significant bedload movement other than the assumed 50% of the 2-year peak flow;
- Zoning and Land Clearing Ordinance restrictions that, in combination with an alternative Flow Control Performance Standard, maintain or reduce the naturally occurring erosive forces on the stream channel; or
- A duration control standard is not necessary for protection, maintenance, or restoration of designated and existing beneficial uses or Clean Water Act compliance.

See the SWMMEW for details on how an Alternative Flow Control Performance Standard may be established.

Additional Requirement

Flow Control BMPs shall be selected in accordance with *6.1.3 Choosing Your Flow Control BMPs*, and designed and maintained in accordance with Chapter 6 of the SWMMEW.

~~Hydrologic Modification of a Wetland~~

~~A wetland receiving stormwater from a new development or redevelopment project can be considered for **hydrologic modification** if it is a Category 3 or Category~~ 4 ~~wetland according to the *Eastern Washington Wetland Rating System* and:~~

- ~~There is good evidence that the natural hydrologic regime of the wetland can be restored by augmenting its water supply with excess stormwater runoff; or the wetland is under imminent threat exclusive of stormwater management and could receive greater protection if acquired for a stormwater management project rather than left in existing ownership; and~~
- ~~The runoff is from the same natural drainage basin; the wetland lies in the natural routing of the runoff; and the site plan allows runoff discharge at the natural location. Exceptions may be made for regional facilities planned by the Local Jurisdiction, but the wetland should receive water from sites in the same watershed.~~

~~Hydrologic modification shall not be allowed if the wetland is classified as Category 1 or Category 2 according to the *Eastern Washington Wetland Rating System* unless the project proponent demonstrates that preferred methods of excess stormwater disposal (*e.g.*, infiltration) are not possible at the site and that other options (*e.g.*, evaporation) would result in more damage to the wetland by limiting inflow.~~

~~Mitigation shall be required for the impact of hydrologic modification to a wetland. Appropriate measures include expansion, enhancement and/or preservation of a buffer around the wetland.~~

.7 Core Element #7: Operation and Maintenance

~~Requirements~~

~~Where structural BMPs are required, property owners~~All new and redevelopment projects meeting the thresholds in Section 3. Applicability of the Core Elements shall ~~operate and maintain the facilities in accordance with~~create an ~~Operation~~operation and maintenance (O&M) manual for all BMPs used to meet 4.5 Core Element #5: Runoff Treatment, 4.6 Core Element #6: Flow Control, and/or 4.8 Core Element #8: Wetlands Protection.

The O&M manual shall identify:

- Maintenance ~~(O&M) plan~~requirements that ~~is prepared in accordance~~are consistent with the provisions in ~~Chapters 5 and 6 of the *Stormwater Management Manual for Eastern Washington* (2004), or another technical stormwater manual approved by Ecology. The O&M plan shall address all proposed stormwater facilities and BMPs, and identify the~~Chapter 6 of the SWMMEW,
- The party (or parties) responsible for operation and maintenance ~~and operation; the O&M plan must also address the~~, and
- A long-term funding mechanism that will support ~~proper O&M~~the operation and maintenance.

~~At~~For private facilities approved by the Permittee, a copy of the ~~plan~~O&M manual shall be retained ~~onsite~~on site or within reasonable access to the site, and shall be transferred with the property to the new owner. For public facilities, a copy of the ~~plan~~O&M manual shall be retained in the appropriate department.

A log of maintenance activity that indicates what actions were taken shall be kept and be available for inspection~~.~~

~~Cities or Counties may develop generic O&M plans, including checklists of actions and procedures for the operators, for BMPs that are commonly used in public projects; commercial and residential property developers may also develop generic O&M plans, including checklists of actions and procedures for the operators, for BMPs that are commonly used in their projects.~~ by the local government.

4.8 Core Element #8: Wetlands Protection

All new and redevelopment projects meeting the thresholds in Section 3. Applicability of the Core Elements shall include Stormwater Management BMPs in accordance with the

following thresholds, standards, and requirements to reduce the impacts of stormwater runoff to wetlands.

Core Element Thresholds

This Core Element applies only to projects whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system.

Levels of Wetland Protection

The following Levels of Wetland Protection are further explained in *Appendix 2-D: Wetland Protection Guidelines* in the SWMMEW.

General Protection

General Protection includes general practices that benefit wetlands of all types.

Protection from Pollutants

Protection from Pollutants includes measures to protect the wetland from pollutants in stormwater runoff. Measures of protection include Construction Stormwater BMPs, Source Control BMPs, LID practices and principles, and Runoff Treatment BMPs.

Wetland Hydroperiod Protection

Wetland Hydroperiod Protection includes measures to avoid excessive hydrologic alteration of existing wetlands from development.

Additional Requirements

Stormwater Management BMPs shall not be built within a wetland or its buffer, except for:

- Necessary conveyance systems as approved by the Permittee; or
- As allowed in 2-D.6 Compensatory Mitigation of Wetlands in the SWMMEW.

Section 5. Adjustments

Adjustments to the Core Elements may be granted by the Permittee provided that written findings of fact are prepared that address the following:

- The adjustment provides substantially equivalent environmental protection.

- Based on sound Engineering practices, the objectives of safety, function, environmental protection, and facility maintenance are met.

Section 6. Exceptions/Variances

Exceptions/variances (exceptions) to the Core Elements may be granted by the Permittee following legal public notice of an application for an exception or variance, legal public notice of the Permittee's decision on the application, and written findings of fact that document the Permittee's determination to grant an exception. Permittees shall keep records, including the written findings of fact, of all local exceptions to the Core Elements.

The Permittee may grant an exception to the Core Elements if such application imposes a severe and unexpected economic hardship. To determine whether the application imposes a severe and unexpected economic hardship on the project applicant, the Permittee must consider and document, with written findings of fact, the following:

- The current (pre-project) use of the Site, and
- How the application of the Core Element(s) restricts the proposed use of the Site compared to the restrictions that existed prior to the adoption of the Core Elements; and
- The possible remaining uses of the Site if the exception were not granted; and
- The uses of the Site that would have been allowed prior to the adoption of the Core Elements; and
- A comparison of the estimated amount and percentage of value loss as a result of the Core Elements versus the estimated amount and percentage of value loss as a result of requirements that existed prior to adoption of the Core Elements; and
- The feasibility for the owner to alter the project to apply the Core Elements.

In addition, any exception must meet the following criteria:

- The exception will not increase risk to the public health and welfare, nor be injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and
- The exception is the least possible exception that could be granted to comply with the intent of the Core Elements.

Section 7. Altering the Core Elements with Basin Plans

Basin Plans provide a mechanism by which the Core Elements and implementing BMPs can be evaluated and refined based on an analysis of a basin or watershed. Basin Plans may be used to develop control strategies to address impacts from future development

and to correct specific problems whose sources are known or suspected. Basin Plans can be effective at addressing both long-term cumulative impacts of pollutant loads and short-term acute impacts of pollutant concentrations, as well as hydrologic impacts to streams, wetlands, and groundwater resources.

Basin Plans may be used by the Permittee to revise the default standards of the following Core Elements:

- 4.5 Core Element #5: Runoff Treatment,
- 4.6 Core Element #6: Flow Control, and/or
- 4.8 Core Element #8: Wetlands Protection.

In order for a Basin Plan to serve as a means of revising the standards of one or more of the Core Elements listed above, the following conditions must be met:

- The Basin Plan must be formally adopted by all jurisdictions with responsibilities under the plan; and
- All ordinances or regulations called for by the Basin Plan must be in effect; and
- The Basin Plan must be reviewed and approved by Ecology.

Basin Plans may also be used to demonstrate an equivalent level of Runoff Treatment, Flow Control, and/or wetland protection through the construction and use of regional stormwater facilities.

Basin Plans will require the use of modeling software and field work to verify and support the models. Permittees who are considering the use of Basin Plans to revise the default standards of one or more of the Core Elements are encouraged to contact Ecology early in the planning stage.

Some examples of how Basin Plans can alter the Core Elements are given in within the guidance for each Core Element in the SWMMEW. See *2.4 Core Elements (CEs)* in the SWMMEW.